

## Claims

1. A liquid cooling system having several cooling units (4), which are individually assigned to electronic component groups (1), which are housed in a rack (2) or switchgear cabinet and are to be cooled, and furthermore having a monitoring and control arrangement (9) for monitoring the cooling temperature,

characterized in that

the cooling units (4) are embodied as liquid cooling units and are connected via branch points (5.1) to a common central liquid line system (5) integrated into the rack (2) or switchgear cabinet, and

the control and monitoring arrangement is embodied for monitoring the cooling temperature in the central liquid line system (5) and for emitting an error signal when a predetermined or predeterminable threshold temperature in a liquid return branch (5.3) is exceeded, or a predetermined or predeterminable threshold temperature difference between a temperature in an inlet branch (5.2) and a temperature in the return branch (5.3) is exceeded, or when the liquid flow falls below a predetermined or predeterminable threshold value.

2. The cooling system in accordance with claim 1,

characterized in that

the error signal is used for triggering an alarm and/or for switching off a common electric current supply for all electronic component groups (1).

3. The cooling system in accordance with claim 1 or 2,  
characterized in that  
the cooling units (4) have cooling elements through which coolant flows, which  
are thermally connected to temperature- sensitive, heat-producing electronic components.

4. The cooling system in accordance with one of the preceding claims,  
characterized in that  
the central liquid line system (5) has a line unit (5.4) provided with an inlet  
conduit and a return conduit, which is mounted vertically oriented in the rack (2) or  
switchgear cabinet and is provided over its length with coupling means, preferably  
equidistantly arranged, for forming the branch points (5.1).

5. The cooling system in accordance with one of the preceding claims,  
characterized in that  
a section of the central liquid line system (5) extending in the rack (2) or  
switchgear cabinet is attached to a vertical frame leg, to at least one mounting rail, or to the  
inside of a lining element.

6. The cooling system in accordance with claim 5,  
characterized in that  
a receptacle, open over its length toward the interior of the rack (2) or  
switchgear cabinet, is integrated on or into the frame leg, into which the section of the central  
liquid line system (5) is inserted.

7. The cooling system in accordance with one of the preceding claims, characterized in that the central liquid line system (5) is connected to an air/liquid heat exchanger (8) and/or a liquid/liquid heat exchanger (6).

8. The cooling system in accordance with claim 7, characterized in that the liquid/liquid heat exchanger (6) is connected to a recooling arrangement (7).